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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,252	07/06/2003	Dennis R. Sigl	ITW7510.070	1251
33647	7590	03/16/2005	EXAMINER	
ZIOLKOWSKI PATENT SOLUTIONS GROUP, SC (ITW) 14135 NORTH CEDARBURG ROAD MEQUON, WI 53097			CHERVINSKY, BORIS LEO	
			ART UNIT	PAPER NUMBER
			2835	

DATE MAILED: 03/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/604,252

Applicant(s)

SIGL ET AL.

Examiner

Boris L. Chervinsky

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 18 is vague and indefinite since the surface is two dimensional by definition, therefore cannot have thickness.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buller et al. in view of Shih.

Buller discloses the extruded heat sink for use in cooling an electronic component 4, the heat sink having a body or base with two sides with a flat planar portion and two laterally facing exterior portions, a plurality of fins 36 extending outwardly from the body and being elongated in the direction along the two lateral exterior portions, each of the lateral surfaces having elongated ridges formed by the groove 34 thereabout extending the full length of the lateral exterior portions, the elongated ridges constructed to

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removably engage the retention means 28 for receiving the heat sink to the frame 2; the heat sink does not have any surface holes and since being extruded (col. 3, line 3) does not need any machining and the retainer maintains contact between the side of the heat sink and the component; the grooves are coplanar. Buller discloses the claimed invention except that the bottom edge of elongated ridges displaced from the flat planar portion above the flat planar portion. Shih discloses the elongated ridges 33, 33a of the heat sink 3 located above the flat planar portion of the heat sink. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to dispose the elongated ridges above the flat portion as disclosed by Shih in the structure disclosed by Buller. Such modification can be possibly useful for easiness of the removal of the heat sink, although Applicants did not provide any proof or justification that having the groove above the base of the heat sink is advantages for its use or its maintenance and it does not appear to be critical for the invention.

5. Claims 4-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Earl et al. in view of Shih.

Earl discloses the heat sink comprising a base 13, a plurality of fins extending from the first side of the base including the first fin and the last fin and the groove formed in the first and the last fin, the groove is engaging a retainer 40 to provide the contact with the heat generating component 30, the first fin and the last fin having a common section adjacent to the base and divergent section extending from elements 14 and 16, the groove is formed proximate an interface of the common section and the divergent section, the grooves are coplanar. Earl discloses the claimed invention except having

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grooves disposed above the base portion. Shih discloses the elongated ridges 33, 33a of the heat sink 3 located above the base portion of the heat sink. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to dispose the elongated ridges above the base as disclosed by Shih in the structure disclosed by Buller (see motivation comments above). Shih also disclose the aluminum as the material for the heat sink and proportionately designed fins as to be extended from the flat bottom, as it is possible using extrusion process as method of making, therefore it is obvious to keep certain relation between the length of the fins and size of the base.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Boris L. Chervinsky whose telephone number is 571-272-2039. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn D. Feild can be reached on 571-272-2800 ext. 35. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BORIS CHERVINSKY
PRIMARY EXAMINER

Boris H. Chervinsky
3/14/5